

General Description

The AH4E Hydramotors are three-position push-type, self-contained, electrohydraulic linear actuators featuring dual internal control valves for repeatable positioning. The low-fire position is factory set at the stroke midpoint, but can be field adjustable to any position between 15% and 100% of stroke.

When power is applied, the actuator shaft travels to the low-fire position. After an external switch completes the low-fire controller circuit, the shaft continues on to the high-fire setting. Opening the external switch returns the shaft to the low-fire setting, and power interruption fully closes the valve in one second or less from any position.

The AH4E Hydramotor/V710(B) gas valve combination provides reliable main line gas control for a wide range of applications, including boilers, furnaces, ovens and all types of industrial and commercial burners.

Specifications

Power Requirement: 220 VA max.

Closing Time: One second max.

Opening Time:

Fast Opening: 14 seconds max.

Slow Opening: 26 seconds max.

Note: Opening time is double between -30°F and -40°F ambient. Opening time increases 20% when operating on 50Hz.

Enclosure

Standard: General Purpose Type 1

Optional: Watertight Type 4

(Also meets General Purpose Type 1 and Raintight Type 3)

Ambient Temperature

-40°F to 150°F (-40°C to 66°C)

Electrical

Standard voltages: 120V/60Hz, 110V/50Hz

Non-standard voltages: 240V/60Hz, 220V/50Hz

Proof of Closure Switch (POC): (optional)

A factory set, non-field adjustable SPDT switch. 1800VA max. connected load (e.g. 15A max. load @ 120V; 7.5A max. load at 240V).

Auxiliary Switch: (optional)

One integral SPDT switch; field adjustable to actuate at any position of stroke. 1800 VA max. connected load (e.g. 15A max. load @ 120V; 7.5A max. load at 240V). (Note: Not available if optional POC switch is ordered)

Electrical Characteristics

Voltage/Hz*	Amperes		
	Inrush	Opening	Holding
120V/60, 110/50	3.6	2.2	0.18
240V/60, 220/50	1.9	1.2	0.09

*Current increases by 20% for 50 Hz operation.



Installation

AH4E Hydramotor mounts in any position directly to a V710 valve with 3 set screws.



Damper Arm Rating

Drives damper in one direction only. 20 lb. max. at 2.85" radius at 20°F to 150°F and 10 lb. max. at -40°F to 20°F. Travel 2" max.

Approvals

AH4E Hydramotor with V710 valve

UL listed to standard 429 "Electrically Operated Valves," Guide Y10Z, File MP932 Safety Valves

FM Approved to Class 7400 "liquid and gas safety shutoff valves."

CSA Certified to:

1. Automatic Gas Valves ANSI Z21.21 CSA 6.5, C/I, File 109157 and 113070.
2. Automatic Gas Safety Shutoff Valves (CGA 3.9), File 113070

Ordering Information

Important: Order by Catalog Number and add suffix number for desired optional feature. e.g. AH4E112A1

Specifications

Applications	Catalog Number	
	120V/60Hz, 110V/50Hz	240V/60Hz, 220V/50Hz
On-Off Slow Opening (26 seconds Max) (Watertight)		
Standard	AH4E102A	AH4E104A
Proof of closure	AH4E102S	AH4E104S
On-Off Slow Opening (26 seconds Max) (General Purpose)		
Standard	AH4E202A	AH4E204A
Proof of closure	AH4E202S	AH4E204S
On-Off Fast Opening (14 seconds Max) (Watertight)		
Standard	AH4E112A	AH4E114A
Proof of closure	AH4E112S	AH4E114S
On-Off Fast Opening (14 seconds Max) (General Purpose)		
Standard	AH4E212A	AH4E214A
Proof of closure	AH4E212S	AH4E214S

Optional Features

Add appropriate suffix number to catalog number

Damper shaft (add Suffix 1)

Damper shaft & arm (add Suffix 4)

One auxiliary switch (add Suffix 2)*

Damper shaft, arm & one auxiliary switch (add Suffix 5)*

*Not available with proof of closure constructions

Dimensions inches (mm)

